

REMARKS

If the Examiner believes a telephone interview will help further the prosecution of this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231 on October 10, 2002.

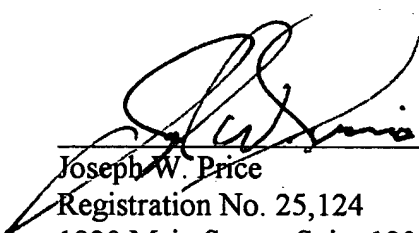
By: Marc Fregoso

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Date: October 10, 2002

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

The claims have been amended as follows.

- 1 1. (Amended) A manufacturing method for a metal electrode whose structure consists of
2 multiple layers of one or more types of metal, comprising:
 - 3 a first print step for printing a first photosensitive substance that includes a mixture of a
4 first metal, a photosensitive resin, and a solvent to form a first layer;
5 a first dry step for drying the first layer;
6 a first exposure step for exposing the first layer to form unevenly exposed regions after the
7 first dry step [producing a predetermined pattern of a first region having a high solvent
8 absorbency and a second region having a lower solvent absorbency than the first region by
9 exposing the first region];
10 a second print step for printing a second photosensitive substance that includes a mixture
11 of a second metal, a photosensitive resin, and a solvent to form a second layer on the first layer
12 [so that a region of the second layer on the first region converts into a third region having a low
13 solvent content and a region of the second layer on the second region converts into a fourth
14 region having a higher solvent content than the third region];
15 a second dry step for drying the second layer [the first and second layers so that flows of
16 the solvent from the first and the fourth regions to the third region occur];
17 a second exposure step for exposing the second layer after the second dry step [so as to
18 leave the third region of the second layer in the following development step];
19 a development step for developing the whole of the first and the second layers [so as to

20 leave the first and the third regions as an electrode pattern and to remove the remaining regions];
21 and
22 a baking step for baking the electrode pattern to shape the metal electrode.

1 2. (Amended) A manufacturing method for a metal electrode whose structure consists of
2 multiple layers of one or more types of metal, comprising:
3 a first print step for printing a first photosensitive substance that includes a mixture of a
4 first metal, a photosensitive resin, and a solvent to form a first layer;
5 a first dry step for drying the first layer to form unevenly heated regions [producing a
6 predetermined pattern of a first region having a high solvent absorbency and a second region
7 having a lower solvent absorbency than the first region by heating the first region];
8 a second print step for printing a second photosensitive substance that includes a mixture
9 of a second metal, a photosensitive resin, and a solvent to form a second layer on the first layer
10 [so that a region of the second layer on the first region converts into a third region having a low
11 solvent content and a region of the second layer on the second region converts into a fourth
12 region having a higher solvent content than the third region];
13 a second dry step for drying the second layer [the first and the second layers so that
14 flows of the solvent from the first and the fourth regions to the third region occur];
15 an exposure step for exposing the whole of the first and the second layers after the second
16 dry step [so as to leave the first and the third regions in the following development step];
17 a development step for developing the whole of the first and the second layers after the
18 exposure step [so as to leave the first and the third regions as an electrode pattern and to remove
19 the remaining regions]; and
20 a baking step for baking the electrode pattern to shape the metal electrode.

1 4. (Amended) The manufacturing methods for the metal electrodes according to Claim 3,
2 wherein
3 in each of the second dry steps, the first layer and the second layer are dried with a
4 member having impermeability to the solvent being arranged on the surface of a region having a
5 high solvent content [the fourth region].

1 7. (Amended) A manufacturing method for a metal electrode, comprising:
2 a print step for printing a photosensitive substance that includes a mixture of a metal, a
3 photosensitive resin, and a solvent to form a layer;
4 a dry step for drying the layer;
5 an exposure step for exposing the layer in a predetermined pattern;
6 a development step for developing the layer to reveal an electrode pattern; and
7 a baking step for baking the revealed electrode pattern to shape the metal electrode;
8 wherein, in the dry step, the layer is heated to form unevenly heated regions [so that a
9 flow of the solvent from a region being still wet and a dry region occurs].

Please add the following newly drafted Claims 15-27:

1 15. (New) The manufacturing method for the metal electrode according to Claim 1, further
2 comprising:
3 a third print step for printing a third photosensitive substance that includes a
4 mixture of a third metal, a photosensitive resin, and a solvent to form a third layer; and
5 a third dry step for drying the third layer,
6 wherein the third print step and the third dry step are provided between the first
7 dry step and the first exposure step.

1 16. (New) The electrode according to Claim 15 wherein the electrode is for use in a plasma
2 display device.

1 17. (New) A photosensitive metal film electrode that is formed on a substrate, wherein the
2 electrode has such a cross-sectional shape in which a film thickness is larger in a center portion
3 than in end portions.

1 18. (New) The electrode according to Claim 17, wherein the electrode has a cross-sectional
2 shape taken along a shorter side direction thereof in which the film thickness is largest in the
3 center portion and is decreased in a curvature with increasing proximity to the edge portions in
4 the shorter side direction.

1 19. (New) The electrode according to Claim 18, wherein the electrode has a dome shape in
2 which a center portion swells upward against the substrate.

1 20. (New) The electrode according to Claim 17, wherein the electrode is for use in a plasma
2 display device.

1 21. (New) A photosensitive metal film electrode that is structured by laminating a layer B on
2 at least a layer A formed on a substrate, wherein the layer B has such a cross-sectional shape in
3 which a film thickness is larger in a center portion than in end portions.

1 22. (New) The electrode according to Claim 21, wherein the layer A is structured by
2 laminating a layer D on a layer C, and has a cross-sectional shape having a concave portion at a
3 top, and the layer B has a cross-sectional shape having a swell portion which swells downward at
4 a bottom.

1 23. (New) The electrode according to Claim 22, wherein the concave portion of the layer A
2 has an arc-shaped curve.

1 24. (New) The electrode according to Claim 22, wherein the layer B has a flat portion at a
2 top.

1 25. (New) The electrode according to Claim 22, wherein the layer C is black, and the layers
2 D and B are white.

1 26. (New) The electrode according to Claim 21, wherein the electrode is formed on a
2 transparent electrode that is formed on the substrate.

1 27. (New) The electrode according to Claim 21, wherein the electrode is for use in a plasma
2 display device.